

GLASGOW UNIVERSITY COMPUTING DEPARTMENT

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Punching of numbers for input.

A number on the form $A \times 10^B$ is punched as:-

$$\begin{matrix} + \\ - \end{matrix} A, \begin{matrix} + \\ - \end{matrix} B$$

where:-

+ signs need not be punched.

A decimal point may occur anywhere within A, or be omitted if not required.

If $B = 0$, the comma and B need not be punched.

The comma must immediately follow the last digit of A.

Carriage Return (CR) Line Feed (LF) or Space characters terminate a number (but not on Letter Shift).

It is permissible to put spaces between the comma and the first character of the exponent, or between the sign and first digit of A or B, but not elsewhere within the number.

The characters (,), =, and all characters on Letter Shift (except Figure Shift) are ignored. (i.e. $TFMP(III) = 123.45$ etc. is possible).

Non-numerical characters, apart from . and , (and those covered in sections 10.2.5 and 10.2.7 above) are invalid, and will cause a failure if read.

A must have not more than 9 digits, excluding non-significant zeros before the point. (This is not fully checked).

Output of results

The procedure statement:-

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print (X, i, f);
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causes X (integer or real) to be printed in fixed or floating form according to the values of the parameters i and f, as follows:-

i > 0 X printed in fixed point decimal, with i places before the point and f places after the point. Non-significant zeros before the decimal point are replaced by spaces. The sign immediately precedes the first digit printed. If X has more figures before the point than allowed for by i, then the extra digits will be printed, but the layout of the page may be spoiled.

f < 0 Decimal point and fractional part omitted.

i = 0 X printed in floating point decimal with one figure before the point and/

→ should be followed by at least 4" of tape. This is necessary for the brake on the paper-tape reader.